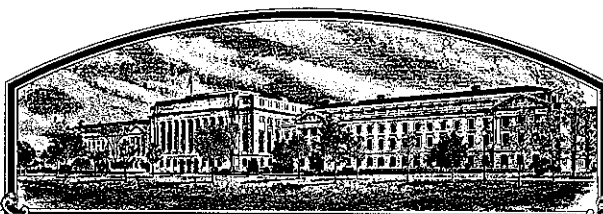


No.

8200174



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Ohio Agricultural R&D Center, and ARS-USDA

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, [THE RIGHT TO EXPOSE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM] TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS OF THE VARIETY AS OWNED BY THE OWNER OF THE RIGHTS. (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

[*Waived, except that this waiver shall not apply to breeder seed, foundation seed, labeling requirements, and blending limitations.]

SOYBEAN
'Hobbit'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 28th day of November in the year of our Lord one thousand nine hundred and eighty-three.

Attest:

Kenneth A. ...
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

John R. Block

Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

FORM APPROVED
OMB NO. 40-R3822

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY HW74-3385		1b. VARIETY NAME Hobbit		FOR OFFICIAL USE ONLY PV NUMBER 8200174	
2. KIND NAME Soybeans		3. GENUS AND SPECIES NAME Glycine max		FILING DATE 9/7/82	TIME 2:30 ^{XXX} P.M.
4. FAMILY NAME (BOTANICAL) Leguminosae		5. DATE OF DETERMINATION 1978		FEE RECEIVED \$ 500.00 \$ 250.00	DATE 9/7/82 10/24/83
6. NAME OF APPLICANT(S) Ohio Agricultural Research and Development Center, The Ohio State University and USDA-ARS		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) OARDC, The Ohio State University, Wooster, OH 44691		8. TELEPHONE AREA CODE AND NUMBER (216)264-1021	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Agricultural Experiment Station			10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION		11. DATE OF INCORPORATION
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: Dr. R. L. Cooper, Dept. of Agronomy OARDC, The Ohio State University, Wooster, OH 44691					

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☐ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☒ YES ☐ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☒ YES ☐ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

July 14, 1982
(DATE)

Richard L. Cooper (Breeder)
(SIGNATURE OF APPLICANT)

7-16-1982
(DATE)

Clive W. Donohue, Jr.
(SIGNATURE OF APPLICANT)

Exhibit A

Origin and Breeding History of the Variety

Hobbit soybean [Glycine max (L.) Merr.] is an F_4 plant selection from the cross Williams x Ransom. The cross was made in 1970 by R. L. Cooper, USDA-ARS Research Agronomist at the Ohio Agricultural Research and Development Center, Wooster, while located at the Illinois Agricultural Experiment Station, Urbana. The F_1 was grown in Puerto Rico in the winter of 1970-71 and the F_2 generation in the field at Urbana, Illinois in 1971. The F_2 derived line from which Hobbit was eventually selected (L72U-2569) was yield tested in a one-row, 3-m plot in the F_3 in 1972 and in four-row, bordered and replicated, 6-m plots in the F_4 in 1973. Due to the outstanding yield of this determinate semidwarf line, 50 plants were pulled from the border rows in 1973 for yield testing as F_4 derived lines in one-row, 3-m plots in 1974.

Several of these plants produced insufficient seed for yield testing in 1974 so were planted in 1.5 m observations rows for increase. One of these lines, HW74-3385 (Hobbit), tested in 1975 in a 4-row, bordered, 6-m plot was selected because of its high yield and advanced to extensive yield testing in both 75 and 17 cm rows in Illinois in 1976 and in Ohio in 1977 to 80. Because of its short, lodging resistant, semidwarf plant type, HW74-3385 was found to be very responsive to narrow rows (17 cm) and high seeding rates (56.2 to 75.0 seeds/m²). HW74-3385 was entered in the Uniform Test III northern States for evaluation (primarily in 75 cm rows) from 1977 to 1980 in Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Missouri, Nebraska, New Jersey, Ohio, Pennsylvania and South Dakota.

Purification of the strain was initiated in 1977 when 40 plants were harvested individually from border rows of the test plots. These 40 plants were grown in plant rows at Wooster, Ohio, in 1978, and harvested as individual plant rows. Twenty of these plant rows were phenotypically identical in the field and had phenotypically identical seed. The seeds from these rows were bulked to produce breeder seed of HW74-3385, which was increased in 1979. In 1980 there were 4,000 kg of breeder seed produced that was

-2-

distributed to the releasing states of Ohio, Illinois, Indiana and Nebraska in 1981. The composite was named Hobbit and publicity released on September 30, 1981.

Variants observed during the development of this variety were few. In the 1980 increase of breeders seed, no variants were observed except those very few that might be traced back to slight admixtures resulting from incomplete combine clean out. Variants resulting in future generations should be within allowable Certification maximums.

Evidence of stability of this variety has been illustrated by no significant change in varietal characteristics after two generations of breeder's seed increase (1979-80) and one generation of foundation seed increase (1981).

Exhibit B

Novelty Statement and Botanical Description of the Variety

Hobbit is a determinate (dt_1dt_1) semidwarf soybean variety of Group III maturity. It has white flowers, tawny pubescence, tan pods at maturity and shiny yellow seeds with a black hilum. Hobbit can be distinguished by flower color from the determinate semidwarf varieties, Elf, Gnome and Pixie which have purple flowers. It is distinguished from the semideterminate (Dt_2Dt_2) varieties by its shorter plant height (approximately 50% the height of Williams compared to 80% for semideterminate varieties) and from indeterminate varieties (Dt_1Dt_1) by its terminal pod cluster and much shorter plant height.

Hobbit was developed specifically for high yield environments where early lodging frequently limits the yield of taller indeterminate varieties. At low yield levels and under severe early stress conditions, Hobbit may be very short and produce less yield than the taller indeterminate varieties.

Because of its smaller plant size and greater lodging resistance, Hobbit is especially responsive to solid seeding and high seeding rates (750,000 seeds/ha in 17-cm rows). Although it will yield well in 75 cm row widths, it is recommended primarily for solid seeding to maximize its yield potential.

Most Similar Variety

The variety most similar to 'Hobbit' is the determinate semidwarf variety 'Sprite'. They are similar in plant habit (dt_1dt_1), flower, pubescence, pod and hilum color and in maturity (-4 days Elf). Hobbit can be distinguished from Sprite by its more slender plant type (slender versus bushy), smaller seed size (15.6 gms versus 17.4 gms/100 seed) and absence (or very low) peroxidase activity in the seed coat compared to high peroxidase activity in the seed coat of Sprite.

8200174

-2-

1980 Uniform Regional Test III Data (Mean of 23 locations)

Variety	Yield	Matu- rity	Lodg- ing	Height	Seed Quality	Seed Size	Composition	
							Protein	Oil
	(bu/A)	(date)	(Score) ¹	(in)	(Score) ²	g/100	%	%
Hobbit	41.7	9-24	1.2	21	1.6	15.6	40.3	22.5
Snrite	39.9	9-24	1.3	21	1.6	17.4	41.1	22.6

¹ 1 erect to 5 prostrate² 1 v good to 5 v poor

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (GLYCINE MAX)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)
Ohio Agricultural Research & Development Center, & USDA, ARS

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)

Ohio Agricultural Research and Development Center
Wooster, OH 44691

FOR OFFICIAL USE ONLY

PVPO NUMBER

8200174

VARIETY NAME OR TEMPORARY IDENTIFICATION

HOBBIT HFS

Place the appropriate number that describes the varietal character of this variety in the boxes below.

1. SEED SHAPE:

☐ 1 = SPHERICAL ☐ 2 = SPHERICAL FLATTENED ☐ 3 = ELONGATE ☐ 4 = OTHER (Specify) _____

2. SEED COAT COLOR:

☐ 1 = YELLOW ☐ 2 = GREEN ☐ 3 = BROWN ☐ 4 = BLACK
☐ 5 = OTHER (Specify) _____

SHADE:

☐ 1 = LIGHT ☐ 2 = MEDIUM ☐ 3 = DARK

3. SEED COAT LUSTER:

☐ 1 = DULL ☐ 2 = SHINY

4. SEED SIZE

☐ ☐ ☐ GRAMS PER 100 SEEDS

5. HILUM COLOR:

☐ 1 = BUFF ☐ 2 = YELLOW ☐ 3 = BROWN ☐ 4 = GRAY ☐ 5 = IMPERFECT BLACK
☐ 6 = BLACK ☐ 7 = OTHER (Specify) _____

SHADE:

☐ 1 = LIGHT ☐ 2 = MEDIUM ☐ 3 = DARK

6. COTYLEDON COLOR:

☐ 1 = YELLOW ☐ 2 = GREEN

7. LEAFLET SIZE (See Reverse):

☐ 1 = SMALL ☐ 2 = MEDIUM ☐ 3 = LARGE

8. LEAFLET SHAPE:

☐ 1 = OVATE ☐ 2 = OBLONG ☐ 3 = LANCEOLATE ☐ 4 = ELLIPTICAL ☐ 5 = OTHER (Specify) _____

9. LEAF COLOR (See reverse):

☐ 1 = LIGHT GREEN ☐ 2 = MEDIUM GREEN ☐ 3 = DARK GREEN

10. FLOWER COLOR:

☐ 1 = WHITE ☐ 2 = PURPLE
☐ 3 = OTHER (Specify) _____

11. POD COLOR:

☐ 1 = TAN ☐ 2 = BROWN ☐ 3 = BLACK

12. POD SET:

☐ 1 = SCATTERED ☐ 2 = CONCENTRATED

13. PLANT PUBESCENCE COLOR:

☐ 1 = GRAY ☐ 2 = BROWN ☐ 3 = OTHER (Specify) _____

SHADE:

☐ 1 = LIGHT ☐ 2 = MEDIUM ☐ 3 = DARK

14. PLANT TYPES (See Reverse):

☐ 1 = SLENDER ☐ 2 = BUSHY ☐ 3 = INTERMEDIATE

15. PLANT HABIT:

☐ 1 = DETERMINATE ☐ 2 = INDETERMINATE
☐ 3 = OTHER (Specify) _____

16. HYPOCOTYL COLOR:

☐ 1 = GREEN ☐ 2 = PURPLE

17. SEED PROTEIN:

☐ 1 = A ☐ 2 = B

18. NUMBER OF DAYS TO FLOWERING
(Place a zero in first box (e.g. 0 9) when days are 9 or less.)

☐ ☐ ☐ 5 5

19. MATURITY GROUP:

☐ 1 = 00 ☐ 2 = 0 ☐ 3 = I ☐ 4 = II ☐ 5 = III
☐ 6 = IV ☐ 7 = V ☐ 8 = VI ☐ 9 = VII ☐ 10 = VIII

20. SIZE OF 10 DAY OLD SEEDLING GROWN UNDER CONSTANT LIGHT (Growth Chamber) AT 25° C. (Place a zero in first box (e.g. 0 2) when size is 9 mm. or less.)

☐ ☐ ☐ MM. LENGTH OF SEEDLING

☐ ☐ ☐ MM. LENGTH OF COTYLEDON

☐ ☐ ☐ MM. WIDTH OF COTYLEDON

21. DISEASE: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

<input type="checkbox"/> BACTERIAL PUSTULE	<input type="checkbox"/> SOYBEAN CYST	<input type="checkbox"/> DOWNY MILDEW	<input type="checkbox"/> PURPLE STAIN	<input type="checkbox"/> POD AND STEM BLIGHT	<input type="checkbox"/> ROOT KNOT
<input type="checkbox"/> FROGEYE	<input type="checkbox"/> STEM CANKER	<input type="checkbox"/> PHYTO-PHTHORA	<input type="checkbox"/> BROWN STEM ROT	<input type="checkbox"/> TARGET SPOT	<input type="checkbox"/> BROWN SPOT
<input type="checkbox"/> BUD BLIGHT	<input type="checkbox"/> WILDFIRE	<input type="checkbox"/> RHIZOCTONIA ROT	<input type="checkbox"/> OTHER (Specify) _____		

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant shape	Gnome	Petiole angle	Gnome
Leaf shape	Sprite	Seed size	Gnome
Leaf color	Sprite	Seed shape	Gnome
Leaf surface	Sprite	Seedling pigmentation	Sprite

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY:

VARIETY	NO. OF DAYS TO MATURITY	LODGING SCORE	PLANT HEIGHT	LEAF SIZE		CONTENT		AVERAGE NO. OF PODS PER PLANT	IODINE NO.
				Width	Length	Protein	Oil		
Submitted	130	1.5	22			41.1	22.6 %		
Name of similar variety Sprite	130	1.5	22			40.3	22.5		

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for completing this form:

1. Scott, Walter O. and Samuel R. Aldrich, 1970, Modern Soybean Production, The Farmer Quarterly.
2. Norman, A. G., 1963, The Soybean: Genetics, Breeding, Physiology, Nutrition, Management.
3. McKie, J. W., and K. L. Anderson, 1970, The Soybean Book.

LEAF COLOR: Nickerson's or any recognized color fan may be used to determine the leaf color of the described variety. The following Soybean varieties may be used as a guide to identify the colors listed on the form.

COLOR	VARIETY
Light Green	"Ada"
Medium Green	"Wilkin"
Dark Green	"Swift"

LEAF SIZE: The following varieties may be used as a guide to identify the relative size leaves.

SIZE	VARIETY
Small	"Amsoy"
Medium	"Bonus"
Large	"Anoka"

PLANT TYPE: The following varieties may be used as a guide to identify the plant type.

TYPE	VARIETY
Slender	"Vansoy"
Intermediate	"Wirth"
Bushy	"Adelphia"

ADDENDUM TO THE APPLICATION FOR
PLANT VARIETY PROTECTION FOR
HOBBIT SOYBEAN

Hobbit soybean was jointly bred by USDA and Ohio Agricultural Research and Development Center employees under a Cooperative Agreement. Therefore, in accordance with USDA policy, the right to exclude others from selling the variety, offering it for sale, reproducing it, importing it, exporting it, or using it in producing a hybrid or different variety therefrom is waived.